IN THE CLAIMS:

Please cancel claims 1-18.

Please add the following new claims 19-30:

19.   (New) A position detector for determining the position of a movable object, the position detector comprising:

one or more rotary members wherein each rotary member is encoded to form a unique bitstream pattern comprised of a predetermined number of bits and for generating a subcode based on the bitstream pattern, the subcode or combined subcodes having a bit value indicative of a position from a plurality of positions; and

a controller for determining the action based on the indicated position.

20.   (New) The position detector according to claim 19, wherein each of the rotary members is configured such that the formed bitstream pattern is comprised of a predetermined unique number of bits thereby enabling each bitstream pattern to be unique relative to each of the other bitstream patterns.

21.   (New) The position detector according to claim 19, wherein inclusion of each additional rotary member increases the number of the plurality positions, wherein the increase in number of positions is based on the number of bits in the bitstream subcode pattern formed by each additional rotary member.

22.   (New) The position detector according to claim 19, further comprising a clock member for generating a timing signal, wherein the controller, responsive to the timing signal, samples each of the subcodes.

23.   (New) The position detector according to claim 19, wherein each of the subcodes is comprised of a differing number of bits.

24.   (New) The position detector according to claim 22, wherein the clock member comprises a light emitter, a light receiver and a rotary interrupter mechanism disposed

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therebetween for selectively interrupting transmission of light from the light emitter to the light receiver, wherein the timing signal is generated upon a transition of the light transmission.

25.   (New) The position detector according to claim 19, wherein the controller accesses a lookup table to convert the coded position to the physical position.

26.   (New) A method for determining the position of a movable object, the method comprising the steps of:

encoding one or more rotary members for enabling each rotary member to generate a unique bit pattern;

rotating each rotary member at least one revolution, thereby generating the unique bit pattern;

sampling a subset of each of the unique bit patterns for generating a unique subcode of each bit pattern; and determining a position of the movable object based on the generated subcode or combined subcodes.

27.   (New) The method of claim 26, wherein each generated subcode differs in bit length.

28.   (New) The method of claim 26, wherein each bit pattern differs in bit length.

29.   (New) The method of claim 26, wherein the determining step further comprises the step of referencing a table for converting the generated subcode to the determined position.

30.   (New) The method of claim 26, further comprising the steps of generating a clock signal for producing an interrupt; and

sampling the bit pattern of each rotary member on each produced interrupt.